

A	B	C	D	E	F	G	H	I	J	K	L
1											
2		User Selected Options									
3		From File			Sheet1_a.wst						
4		Full Precision			OFF						
5		Confidence Coefficient			95%						
6		Number of Bootstrap Operations			2000						
7											
8											
9		Result_Value (1,3-dichlorobenzene_ug/kg)									
10											
11						General Statistics					
12					Number of Valid Data	8				Number of Detected Data	0
13					Number of Distinct Detected Data	0				Number of Non-Detect Data	8
14										Percent Non-Detects	100.00%
15											
16		Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!									
17		Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!									
18		The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV)									
19											
20		The data set for variable Result_Value (1,3-dichlorobenzene_ug/kg) was not processed!									
21											
22											
23											
24		Result_Value (hexachlorobenzene_ug/kg)									
25											
26					General Statistics						
27					Number of Valid Observations	8				Number of Distinct Observations	8
28											
29					Raw Statistics					Log-transformed Statistics	
30					Minimum	537				Minimum of Log Data	6.286
31					Maximum	913				Maximum of Log Data	6.817
32					Mean	710.4				Mean of log Data	6.551
33					Geometric Mean	700				SD of log Data	0.183
34					Median	694.5					
35					SD	130.4					
36					Std. Error of Mean	46.09					
37					Coefficient of Variation	0.183					
38					Skewness	0.292					
39											
40											
41		Warning: There are only 8 Values in this data									
42		Note: It should be noted that even though bootstrap methods may be performed on this data set,									
43		the resulting calculations may not be reliable enough to draw conclusions									
44											
45		The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.									
46											
47					Relevant UCL Statistics						
48					Normal Distribution Test					Lognormal Distribution Test	
49					Shapiro Wilk Test Statistic	0.967				Shapiro Wilk Test Statistic	0.973
50					Shapiro Wilk Critical Value	0.818				Shapiro Wilk Critical Value	0.818
51		Data appear Normal at 5% Significance Level								Data appear Lognormal at 5% Significance Level	
52											
53		Assuming Normal Distribution								Assuming Lognormal Distribution	
54		95% Student's-t UCL			797.7					95% H-UCL	813.6
55		95% UCLs (Adjusted for Skewness)								95% Chebyshev (MVUE) UCL	911.6
56		95% Adjusted-CLT UCL (Chen-1995)			791.3					97.5% Chebyshev (MVUE) UCL	998.6
57		95% Modified-t UCL (Johnson-1978)			798.5					99% Chebyshev (MVUE) UCL	1170
58											
59		Gamma Distribution Test								Data Distribution	
60		k star (bias corrected)			21.42					Data appear Normal at 5% Significance Level	
61		Theta Star			33.16						
62		MLE of Mean			710.4						
63		MLE of Standard Deviation			153.5						
64		nu star			342.7						
65		Approximate Chi Square Value (.05)			300.8					Nonparametric Statistics	
66		Adjusted Level of Significance			0.0195					95% CLT UCL	786.2
67		Adjusted Chi Square Value			290.8					95% Jackknife UCL	797.7
68										95% Standard Bootstrap UCL	781.9
69		Anderson-Darling Test Statistic			0.186					95% Bootstrap-t UCL	806.8
70		Anderson-Darling 5% Critical Value			0.716					95% Hall's Bootstrap UCL	787.9
71		Kolmogorov-Smirnov Test Statistic			0.145					95% Percentile Bootstrap UCL	784.8
72		Kolmogorov-Smirnov 5% Critical Value			0.294					95% BCA Bootstrap UCL	780.1
73		Data appear Gamma Distributed at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL	911.3

A	B	C	D	E	F	G	H	I	J	K	L		
147	148	Result_Value (total dioxin/furan teq 1998 (avian) (u = 1/2)_ng/kg)	149	150	General Statistics	151	Number of Valid Observations	2	152	Number of Distinct Observations	2		
153	154	Warning: This data set only has 2 observations!	155	Data set is too small to compute reliable and meaningful statistics and estimates!	156	The data set for variable Result_Value (total dioxin/furan teq 1998 (avian) (u = 1/2)_ng/kg) was not processed!	157	158	It is suggested to collect at least 8 to 10 observations before using these statistical methods!	159	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.		
160	161	162	163	Result_Value (total pcb congener (u = 1/2)_ng/kg)	164	165	General Statistics	166	Number of Valid Observations	8	167	Number of Distinct Observations	8
168	169	Raw Statistics	170	171	172	173	174	175	176	177	178	Log-transformed Statistics	179
180	181	Minimum 996653	182	183	184	185	186	187	188	189	190	Minimum of Log Data 13.81	191
192	193	Maximum 2192372	194	195	196	197	198	199	200	201	202	Maximum of Log Data 14.6	192
203	204	Mean 1716066	205	206	207	208	209	210	211	212	213	Mean of log Data 14.32	203
214	215	Geometric Mean 1658510	216	217	218	219	220	221	222	223	224	SD of log Data 0.29	214
225	226	Median 1847710	227	228	229	230	231	232	233	234	235	225	226
236	237	SD 443301	238	239	240	241	242	243	244	245	246	236	237
247	248	Std. Error of Mean 156730	249	250	251	252	253	254	255	256	257	247	248
258	259	Coefficient of Variation 0.258	260	261	262	263	264	265	266	267	268	258	259
269	270	Skewness -0.73	271	272	273	274	275	276	277	278	279	269	270
280	281	282	283	284	285	286	287	288	289	290	291	280	281
292	293	294	295	296	297	298	299	300	301	302	303	292	293
304	305	306	307	308	309	310	311	312	313	314	315	304	305
316	317	318	319	320	321	322	323	324	325	326	327	316	317
328	329	330	331	332	333	334	335	336	337	338	339	328	329
340	341	342	343	344	345	346	347	348	349	350	351	340	341
352	353	354	355	356	357	358	359	360	361	362	363	352	353
364	365	366	367	368	369	370	371	372	373	374	375	364	365
376	377	378	379	380	381	382	383	384	385	386	387	376	377
388	389	390	391	392	393	394	395	396	397	398	399	388	389
400	401	402	403	404	405	406	407	408	409	410	411	400	401
412	413	414	415	416	417	418	419	420	421	422	423	412	413
424	425	426	427	428	429	430	431	432	433	434	435	424	425
436	437	438	439	440	441	442	443	444	445	446	447	436	437
448	449	450	451	452	453	454	455	456	457	458	459	448	449
460	461	462	463	464	465	466	467	468	469	470	471	460	461
472	473	474	475	476	477	478	479	480	481	482	483	472	473
484	485	486	487	488	489	490	491	492	493	494	495	484	485
496	497	498	499	500	501	502	503	504	505	506	507	496	497
508	509	510	511	512	513	514	515	516	517	518	519	508	509
520	521	522	523	524	525	526	527	528	529	530	531	520	521
532	533	534	535	536	537	538	539	540	541	542	543	532	533
544	545	546	547	548	549	550	551	552	553	554	555	544	545
556	557	558	559	560	561	562	563	564	565	566	567	556	557
568	569	570	571	572	573	574	575	576	577	578	579	568	569
580	581	582	583	584	585	586	587	588	589	590	591	580	581
592	593	594	595	596	597	598	599	600	601	602	603	592	593
604	605	606	607	608	609	610	611	612	613	614	615	604	605
616	617	618	619	620	621	622	623	624	625	626	627	616	617
628	629	630	631	632	633	634	635	636	637	638	639	628	629
640	641	642	643	644	645	646	647	648	649	650	651	640	641
652	653	654	655	656	657	658	659	660	661	662	663	652	653
664	665	666	667	668	669	670	671	672	673	674	675	664	665
676	677	678	679	680	681	682	683	684	685	686	687	676	677
688	689	690	691	692	693	694	695	696	697	698	699	688	689
700	701	702	703	704	705	706	707	708	709	710	711	700	701
712	713	714	715	716	717	718	719	720	721	722	723	712	713
724	725	726	727	728	729	730	731	732	733	734	735	724	725
736	737	738	739	740	741	742	743	744	745	746	747	736	737
748	749	750	751	752	753	754	755	756	757	758	759	748	749
760	761	762	763	764	765	766	767	768	769	770	771	760	761
772	773	774	775	776	777	778	779	780	781	782	783	772	773
784	785	786	787	788	789	790	791	792	793	794	795	784	785
796	797	798	799	800	801	802	803	804	805	806	807	796	797
808	809	810	811	812	813	814	815	816	817	818	819	808	809
820	821	822	823	824	825	826	827	828	829	830	831	820	821
832	833	834	835	836	837	838	839	840	841	842	843	832	833
844	845	846	847	848	849	850	851	852	853	854	855	844	845
856	857	858	859	860	861	862	863	864	865	866	867	856	857
868	869	870	871	872	873	874	875	876	877	878	879	868	869
880	881	882	883	884	885	886	887	888	889	890	891	880	881
892	893	894	895	896	897	898	899	900	901	902	903	892	893
904	905	906	907	908	909	910	911	912	913	914	915	904	905
916	917	918	919	920	921	922	923	924	925	926	927	916	917
928	929	930	931	932	933	934	935	936	937	938	939	928	929
940	941	942	943	944	945	946	947	948	949	950	951	940	941
952	953	954	955	956	957	958	959	960	961	962	963	952	953
964	965	966	967	968	969	970	971	972	973	974	975	964	965
976	977	978	979	980	981	982	983	984	985	986	987	976	977
988	989	990	991	992	993	994	995	996	997	998	999	988	989
999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	999	1000

